#### Vellayam Kallu (Sacrifice rock)

**'Dragon flies of Vellayam kallu'**. The souls of dead people will go to Vellayam Kallu as dragon flies, is a myth in Northern Kerala, and the Kendra sahithya academy award winner novelist Shri M. Mukundan has narrated this myth beautifully in one of his Novels.

Vellayam Kallu, a Semi-submerged rock of around 1 Hectare area and 6 meter above sea level in the Arabian Sea, is 8 Km. away from Kadalur Point, and 30 Km. North of Kozhikode (Calicut) Port in South India. 'West Coast India Pilot', the hand book for mariners, in it's sixth edition of 1919 describes this rock as '58 feet in height, is composed of granite and having a white appearance from the birds' deposits'. Millions of birds from Europe and Russia migrate to South India every year when the winter sets in Europe and thousands of them find a safe nesting place on this rock. Thus birds' deposit gave this rock its whitish colour and the name 'Vellayam Kallu' (Whitish rock in the local language Malayalam). From 15<sup>th</sup> to 19<sup>th</sup> century, Pirates found a nice haven among these submerged rocks to conduct unexpected attacks on the passing merchant ships and used Vellayam Kallu to divide and store their loot and kill the prisoners. When they looted some British vessels and beheaded the prisoners after taking them to rock, the British named 'Vellayam Kallu' as 'Sacrifice Rock'.

West Coast India Pilot narrates Kadalur point as; "Kadalur point is low but prominent, and covered with cocoanut trees, over which will be seen a large round tree; from this point hills rise gradually in a north-east direction."

### **Obstruction to sailors**

Between Calicut and Kadalur point, the shore recedes around 10 Km. forming a bay which makes Sacrifice Rock right in the navigational path between Kozhikode and Mumbai (Bombay), threatening the safety of navigation through this area. Kappad, where the famous Portuguese navigator Vasco da Gama first alighted in the Indian sub continent in 1498 in search of a sea route to India for challenging the monopoly of Arabian traders on pepper and spices of Kerala, is very near to Kadalur and the spot is clearly visible from the lighthouse top. The 14<sup>th</sup> century ancient port of Panthalayani, where the Chinese and Arab did brisk business by trading silk and precious stones with pepper and spices was in the visibility. At the time of Portuguese invasion, Calicut and Cannanore were the busy Ports of this area and the Chinese and Arab vessels calling these ports were well aware of the danger from Vellayam Kallu and kept well away from it.

### Cotta Point

After Portuguese, the Dutch came to Kerala coast for trading, and slowly they started taking administrative control of small areas and built forts and bastions to protect their men and interests. The British came to India in 1601 for business and they also started taking administrative control of small kingdoms and their first fort in Kerala was at Telicherry. After invasion of Hyder Ali the King of Mysore in 1766 and later in 1786 by his son Tippu Sultan, complete North Kerala came under their control. Since the forces of Tippu Sultan and British fought face to face at several places and occasions, Tippu always expected a British attack from sea and to get a better view of the sea and to forewarn his force of any attack from sea, a bastion was constructed by Tippu at Kadalur seashore and that tip of land was later termed as Cotta Point (Fort point). The remains of this bastion were available along the seashore till recent years and now it has completely disappeared due to vandalism and sea erosion.

### Formation of Malabar District and Madras state

When the British defeated Tippu Sultan in 1792 at Srirangapatinam, along with Mysore, north Kerala also came under British rule and Malabar District was formed on 19<sup>th</sup>

March 1792 under Madras State. Ports of Calicut and Cannanore flourished under the British rule and along with the trade through these ports, vessel traffic between Calicut and Mumbai increased several folds and thus started shipwrecks at Sacrifice rock. Whether the souls of the dead goes to Vellayam Kallu or not, several mariners lost their souls in these shipwrecks which forced the British India Government to seriously consider about the proposal for a lighthouse to mark the danger from Sacrifice rock.

#### Proposal for lighthouse at Sacrifice rock

When the British India Government decided to construct a new landfall lighthouses and improve the existing lights by rising new towers along Indian coast for the smooth sailing of vessels, under Madras Presidency also new towers at Kalingapatinam, Sacramento, Santapille, Pulicat, Seven Pagodas (Mahabalipuram), Manappad, Tangassery, Calicut, Cotta Point (Kadalur point), Cannanore and Kalph were proposed. Even though some of the proposed lighthouse towers were constructed with out delay, some were left behind. In 1895, then Presidency Port Officer of Madras, Commander W J Powell decided to take up the work of Cotta point lighthouse and Mr. F W Ashpitel, an Executive Engineer with Public Works Department on deputation to Marine Department as Superintendent of works, Lighthouse Division, was asked to submit a report on this.

Mr. Ashpitel, after his inspection of the site, strongly proposed for the light and he was in the opinion that the light should be on the Sacrifice Rock itself, and not on the coast, for the safe passage of vessel traffic. In 1896, he has reported that "South of Mulki, the next danger to navigation is the Sacrifice rock, 40 feet high and deep water all around. This rock is  $4^{1/2}$  miles from Cotta point and is on the direct track of steamers from Bombay. An 18-mile flashing light, on the rock would guard this danger and be useful as a landfall light for the Ports of Telicherry and Calicut, the existing lights at these stations being relegated to the property as Port lights."

Commander W J Powell, then Presidency Port Officer disagreed with this proposal and wrote that "Class of light is approved, but the proposal to establish it on the rock itself, I do not support for the following reasons:- No communication at least 4 months in the year; great expense in the construction, keepers will have to be provisioned; difficulties and expense for inspection greatly increased involving hire of a steamer on the upkeep of a boat on the mainland. The danger can be effectively guarded by a light on the mainland......On Cotta point is the position I propose for the light".

But, Ashpitel was obstinate in this regard and resubmitted the file with out changing his proposal, stating that a lighthouse on the rock only can give 100% security to the mariners and landing on the rock will be possible at least once in two weeks even in monsoon season. To support his claim, he quoted the Bishop Rock lighthouse of Sicily Isles of Great Britain that stands intact facing the fury of Atlantic Ocean. It seems that Mr. Ashpitel had dreamed of the fame awaiting him after construction of Sacrifice rock lighthouse, like Mr. Robert Stevenson (1772-1850) who had designed and executed famous Bell Rock lighthouse of Scotland for Northern lighthouse board, and later called as father of lighthouse engineering for his famous design of 'Sea washed' lighthouses and his children and grand children who continued the legacy and designed and executed most of the lighthouse towers in Scotland in the most difficult terrains; or at least to take the path of Mr. Alexander Fraser, the erstwhile Imperial Lighthouse Engineer of India, who had designed and constructed a beautiful lighthouse at Alguada reefs in the mouth of Irawaddy river in Burma which was of a part of British India then, and got the appreciation letter from Queen Victoria. (This lighthouse was shelled and demolished by the United States Marines in the Second World War)

### Lighthouse at Cotta Point

The presidency Port Officer forwarded the file to Government with his difference of opinion and Governor Lord Wenlock gave the final verdict that '*a stronger light on the* 

*mainland must be better than a weaker one on the rocks.*' Accordingly, Government order No. 245 dated 8<sup>th</sup> April 1896 deciding that '*the proposal to place a light on Cotta Point will be the best*' was passed, But the file containing these remarks was either missing or the contents of this file were not brought to the notice of the succeeded Presidency Port officers.

#### Ashpitel tries again

Mr Ashpitel took the proposal for lighthouse on Sacrifice rock into front burners after a gap of 5 years, with the submission of a detailed estimate of Rs. 94400/- for construction of the lighthouse on the rock. There is no record to show who has entrusted the work of preparing an estimate of Cotta Point lighthouse to Mr Ashpitel and that too on the Sacrifice rock. Mr. Ashpitel after visiting the site proposed to construct the lighthouse on the Sacrifice Rock and submitted the estimate for construction on 30<sup>th</sup> August 1901 and Commander H A Street who has succeeded Mr. W J Powell as Presidency Port officer and not aware of the previous orders of Governor, forwarded the estimate to Government after duly countersigning on 4<sup>th</sup> September.

### Lighthouse can wait

Since Govt. cold shouldered this proposal, Commander T. G. R. Finny who succeeded H. A. Street, wrote again to Government on 31<sup>st</sup> July 1902 explaining how important this lighthouse will be on passing of the Coast light dues bill that is under consideration of the state. Reply from Government vide order No. 707, Marine dated 28<sup>th</sup> August 1902 was again negative stating the '*lighthouse can wait*'.

### Lighthouse designed by Ashpitel

The lighthouse designed by Mr Ashpitel was in line with the Rock lighthouses of Scotland. Instead of huge dressed granite stones used for the construction of Scottish 'Sea washed' lighthouses, Ashpitel planned huge interlocking concrete blocks formed in special moulds that can fall in place as if in a jig saw puzzle to form the outer wall strong enough to face the fury of sea. The basement had an inbuilt masonry tank to hold 2500 Gallon fresh water and the ground floor had 3 metal water tanks of 1100-gallon capacity each. The first floor was designed to store oil required to light the lamps and other essential items. The spiral stair case from ground floor to service room was to be formed with granite slabs embedded in the walls and projecting 3 feet and one inch from the inside wall of the tower. Living quarters for Light keepers was planned inside the tower itself. Bedroom with folding cots, cabinets, armed chairs, shelves, teapoys and hat pegs, Kitchen with kitchen table, oil stove, round dining table dining chairs, meat safe, sink etc., and bath room with bath tub, wash basin, towel rack etc., were planned in detail.

A boat basin with an estimate of Rs. 10000- was planned on the east side of the rock with an expectation to get smooth water there round the year. Cut steps on the rock for easy climbing and block upon an opening between two rocks to exclude the swell of the sea were planned for smooth landing through out the year. For fresh water source, there were three separate plans; 1) Rain water collection from the galleries. 2) Supply from mainland using boats in the summer season and 3) Collecting fresh water from condensing seawater from shallow glazed reservoirs. Fresh water was to be carried to kitchen and bathroom by hand, but a pumping system for sea water for washing etc. was planned by installing a system on the near by rock and using the wave power to pump the water.

## Vision of Ashpitel

The estimate submitted by Mr Ashpitel had vision about every thing in detail including crockery and cutlery to be provided in the Kitchen. Readers can see the list of items he proposed to procure for the Kitchen.

Round Dining table-1, Kitchen table-1, Sink-1, Oil stove-1, Plate rack and dresser-1, Meat safe-1, Arm chairs-3, Curry stone-1, Rice pounder-1, Sauce pans-4, Frying pan-1, Kettles-3, Basins-3, Kitchen spoons-3, Kitchen knife-2, Nutmeg grate-1, Strainer-1, Pie dishes-3, Chopper-1, Tin opener-1, Cork screw-1, Spittoon-1, Carving knife and fork-1, Knifes-6, Forks-6, Spoons-6, Tea spoons-6, Mustard pot-1, Pepper pot-1, Tea pot-1, Coffee pot-1, Enamel tumblers-4, Salt cellars-2, Jugs-3, Meat dishes-3, Vegetable dishes-2, Soup plates-6, Dinner plates-6, Small plates-6, Cups and saucers-6, Table cloths-6, Matey towels-3 Dozen, Knife bowel-1, Filter-1, Clock-1, Stop pial-1, and Hat pegs-3.

A man who has envisaged everything in such a scale had not mentioned about the cost of a steam launch to be purchased for transporting materiel and workers from mainland to rock at the time of construction and for arranging transport to the staff, once the lighthouse is commissioned. May be Mr Ashpitel was afraid that an extra expenditure of Rs, 50000- plus projected in the estimate will remind the authorities about their earlier refusal and cut his dream of a lighthouse on Sacrifice Rock and way to fame, once for all. The superiors of Ashpitel, who had forgotten the Government order placing the lighthouse at Cotta Point, could not point out this serious fault in the estimate while forwarding the same to Government for orders.

### Coast light dues bill passed

When the Coast light dues bill was passed in 1904, a proposal was moved to take a loan from the provincial funds with an interest @ 4% per annum to meet the expenditure for the construction of the Sacrifice Rock lighthouse and to repay the sum by collecting the light dues. But the permission was denied due to technical problems on lending money to coast light establishment from the provincial funds.

#### Govt. sanction and appointment of Captain Smith

The Government sanction for the Sacrifice Rock lighthouse was finally signed on 14<sup>th</sup> November 1906 by Mr F. J. Wilson, Secretary to the Government. Honorary Captain Smith, an Executive Engineer with Public Works Department was appointed as in charge of the works considering his previous experience in construction of lighthouse towers. Orders were passed to relieve Captain Smith of his Sub divisional charges by the end of January 1907 and placing him in executive charges of the work under the direct orders of the Superintending Engineer. Captain Smith who was to retire from service on 14<sup>th</sup> May 1907 was given extension of service till the end of lighthouse construction as temporary engineer, and allowed to draw a monthly salary of Rs. 600/- in addition to his Military pension of the rank for the extended period of service and permitted to draw traveling allowance on the scale allowed to Executive Engineers.

Captain Smith, who resumed charges on 1<sup>st</sup> February 1907, wasted no time and started the work of leveling the rock for building foundation for tower and making moulds for casting the concrete blocks. He has transported the labourers to rock in country crafts available with local fishermen and when the requirement of a mechanised launch aroused for transporting huge concrete blocks to rock, realised that there is no provision kept in the estimate for procurement of a Steam launch for transportation of construction materials from mainland to the rock.

### Flaw in estimate pointed out

Captain Smith has reported the matter to the Superintending Engineer of Public Works Department Mr. O' Connell, and in consultation with him, submitted a revised estimate for the construction work, keeping a provision of Rs. 54000- for purchase of a Steam launch and Rs. 16000- towards the maintenance of launch including the payment for crews.

Mr. O' Connell has forwarded the fresh estimate to the Chief Engineer, but in his demi-official page, questioned the building on the rock. The chief Engineer made a remark that the lighthouse including the cost of steam launch will cost Rs. 171400- instead of Rs. 94000- and expressed himself in favour of building the lighthouse on Cotta Point. The Public Works Department passed the file to Marine Department with a question mark on site of the lighthouse.

#### Again to Cotta Point

After passing different offices, when the file reached the Chief Secretary, his remark was as follows; "The decision of 1896, seems to have been overlooked in March 1905, when the construction of a lighthouse on the rock was approved in Marine (No. 166, Marine dated 17<sup>th</sup> March 1906).

Submitted that Government may adhere to the decision of 1896 to build on Cotta Point, especially the Presidency Port officer and the Superintending Engineer concerned both consider that on the whole the lighthouse should be there and not on the rock."

The Governor made the following remark and put the last nail on the proposal for the lighthouse on the Sacrifice Rock.

"We may revive the decision of 1896 to build on Cotta Point. There will be serious trouble in feeding the light-keepers in the south- west monsoon if it is on the rock."

The draft order on this regard was submitted on 20<sup>th</sup> May 1907 and it read as follows:

"In 1896 Government decided to build the Sacrifice Rock lighthouse on the mainland. How the proposal came to be changed is not clear, but it has been assumed for some years past that the lighthouse would be on the rock. The estimate for Rs. 94000was agreed to, but it is now reported that the light will cost nearly twice that sum and there will be a heavy recurring expenditure on a powerful steam launch to keep up communication with the rock. I therefore submit the draft order, which his Excellency has directed to be prepared changing the proposed site. The presidency port officer agrees and it is certain that much money, both initial and recurring charges will be saved."

And the final order was passed on 21<sup>st</sup> May 1907 (G O No. 216A, Marine).

#### Land acquisition

To construct the lighthouse at Cotta Point, 27.07 acres of land at a cost of Rs. 2050/- was acquired at Oottu Kunnu in Vanmugam Amsam, Kadalur Desam of Kurumbanadu Taluk and to construct an approach road from the Main road to the lighthouse, another 1.97-acre land also was acquired. A revised estimate amounting Rs. 84000/- for construction of a lighthouse at Cotta Point, in lieu of sanctioned estimate at the Sacrifice Rock was passed on 22<sup>nd</sup> November 1907 (G O No.1262A). When the tower was shifted from Rock to Cotta Point, the design also changed and instead of concrete blocks, wire cut bricks were proposed for construction of tower and provisions were kept for the construction of three separate family quarters for the Light keepers.

### Construction starts

The construction work of the cylindrical shaped tower using wire cut bricks from Basal mission tile factory at Mangalore was started at the end of 1907. Embedding 133 granite slabs in brickwork formed a spiral staircase to reach the service room and then 22 steps with soft stones to reach lantern room. A spiral handrail of mild steel sections is provided for safety. The 34 meter high tower on the hillock could give an altogether elevation of 51 meter above sea level and a geographical range of 27 Nautical miles.

The lantern room of brickwork and 2-tier glazing with curved glasses and teak wood lining and brass hit and miss ventilators inside the lantern room, controls the indoor temperature and as well makes it exquisite. A wind direction finder is provided on top of the copper doom.

#### Lighthouse equipment

Regarding the equipment to be installed at Cotta Point lighthouse, Trinity House, London, the authority that control all British lights was contacted for expert opinion, and the 'Elder Brethren" of Trinity house recommended for Second order revolving optic with 55mm Petroleum vapor burners as illuminant. There was a doubt about whether to use 'Chance Brothers' made Petroleum vapor burners or latest developed 'Kitson' made incandescent burners; and to study this, Mr. Cuthbert, Inspector of Lighthouses was deputed to England.

At England, after acquainting with all types of lighthouse equipment available with Trinity House and visiting some lighthouses and one of the lighthouse vessels, Mr. Cuthbert perhaps got disturbed and interfered in the subject that he was not supposed to. Mr. Cuthbert, who was deputed to select the illuminant for Cotta Point, in his letter dated 12<sup>th</sup> March 1908, wrote to the Engineer-in-chief of Trinity house stating,

"After careful consideration of the subject, I have decided that a third order single flashing apparatus (500 m/m focal length) having four panels of 900 horiz; and 800 Vertical and making one revolution in 20 seconds will, with 35 m/m incandescent oil burner in the focus, be the best combination to select, both from the point of view of efficiency and economy, and I therefore wish that this combination be installed in the lighthouse in question"

The source of illuminant selected by Mr. Cuthbert was 'Chance' burners and he commented,

"The source of illumination will be "Chance" incandescent oil burners as it is in my opinion undoubtfully, for many reasons, the most suitable incandescent oil burner, of which I have any practical knowledge or experience, to introduce into the Madras lighthouses".

#### Petroleum vapour burners

In petroleum vapour burners, pressurised kerosene (Paraffin oil in olden days) is pre heated and injected though a small nozzle to convert it to gas. A small part of this gas is then used to preheat the kerosene and the major part of gas mixed with air sent through wire gauzes to filter and give even pressure is burned on top of the burner. A mantle made of silk cotton is kept over the flame to convert the bluish flame to white light. The efficiency of these lamps is several folds higher than wick burnt Capillary lamps.

#### Lighthouse Optic

A lighthouse optic with a Plano convex lens in the middle as 'Bull eye' and Catoptric and Catadioptric prisms on the sides prevent the light from scattering and sends the light as beams to longer distances. Every lighthouse will have an advertised character to identify it from the sea by counting its frequency of flash. In a revolving light this characteristic is achieved by placing the bull eye in the required angles and rotating the optic at constant speed obtain. The optic installed at Kadalur Point lighthouse has 4 panels arranged in 90° angles and speed of rotation is 3 RPM, to give the character of single flash (White) in every five seconds. An optic can be called as the heart of a lighthouse as it takes a major role in increasing the efficiency of the light and generate a character.

# Waiting for equipments

The tower construction work of Kadalur Point lighthouse was completed by September 1908 and expecting the supply of lighthouse equipment by January 1909 from England, the Presidency Port Officer, Madras has issued a Mariners notice on 13<sup>th</sup> October 1908 stating that the Cotta Point light will be exhibited from 1<sup>st</sup> April 1909. But due to the complications involved after the recommendations of Mr. Cuthbert for change in optic and burner size, final order for supply of equipment could not be placed with the suppliers in time which caused an undue delay in its supply. Port authorities in England who were aware of these situation, has issued another notice to ships leaving English ports warning that the Cotta Point will not be functioning from 1<sup>st</sup> April 1909, as advertised by the Indian authorities, and informed the Chief Hydrographer of India and Presidency Port Officer, Madras that the equipment will be ready by May 1909 only. Accordingly the Presidency Port Officer issued another notice on 29<sup>th</sup> January 1909.

### Installation of equipments

Lighthouse Engineer Mr. Cuthbert, who had been trained at England on lighthouse equipments and its installation, was the automatic selection for the post of Installation Engineer. Lighthouse Mechanics Somasukharam and Halliburn were assigned to help Mr. Cuthbert and they did such a commendable job that the equipments installed by them are still in service without any major wear and tear. The only major alteration during the last 100 years was made in the lantern room by reducing its visibility spectrum from  $360^{\circ}$  to  $240^{\circ}$ .

As per the prevailing staff pattern, one Head Lightkeeper and two Assistant light keepers were posted to the lighthouse one week before the commissioning of the light. Mr. Joseph was the first Head Lightkeeper at Kadalur point and his pay was fixed as Rs. 60/-per month. Family quarters were provided to the light keepers at the time of commissioning itself and the same are being used till date. Presidency Port Officer's request for sanction of two Lascars and one Scavenger with a monthly pay of Rs. 8/- and Rs. 5/- respectively was also approved by the Government.

The Mariners notice No.32 of 1909 was published on 13<sup>th</sup> September 1909 stating that 'the Dioptric second order single flashing white light specified in this Office Notices to Mariners Nos. 29 of 1908 and 3 of 1909 will be exhibited on and after the 20<sup>th</sup> October 1909.'

#### Commissioning of lighthouse

## Lighthouse railway gate

To connect the Lighthouse hillock to the Calicut-Cannanore road (Now National highway-17), 1.97 acres of land was acquired during the construction work of the lighthouse and a road was laid from lighthouse to main road. Since the road had to cross the Mangalore Madras railway line, a railway gate was provided for the exclusive use of the lighthouse. When local Panchayat has laid another road connecting the area with National highway without crossing the railway line in 1985, the lighthouse railway gate was abandoned and removed later.

### Day marks

The lighthouse towers are called '**day marks**' as the mariners can identify them in daytime by its shape, height and colour. When identical towers are constructed in adjacent area, the towers are painted with different colours and colour patterns for easy identification. Kadalur point lighthouse was maintained in cement-plastered form for a long time and the present colour pattern of black and white horizontal bands was given in 1968.

### Change of name

Once shifted from the Sacrifice Rock to the mainland, there was a discrepancy in the name of lighthouse. In different files, it was mentioned as Kadalur, Kottah Point, Cotta Point, Cotta and Kotta. Cotta stands for fort in the local language, and different officers spelt this Malayalam word in English different ways and Kadalur was recorded name in the land survey records. So to clear this, the Presidency Port Officer wrote to Surveyor in charge, Marine survey of India and their report was more confusing for the survey records also had different names. The summery of report was as follows.

#### Cotta Point, West Coast of India

#### (Lat. 11<sup>0</sup> 29'N: Long. 75<sup>0</sup> 38' 40"E)

British Chart, No. 64- 1887	=	Kadalur or Cotta
British Chart, No. 747-1859	=	Kadalur or Cotta
British chart No. 827- 187 British		
sailing directions, 1898	=	Kadalur or Cotta
British sailing directions, 1898	=	Kadalur or Cotta
India Notice to mariners, Bombay	,	
Castle, October 1908	=	Kadalur or Cotta
Hydrographic office chart 1590-1898=		(Cotta) Kadalur
British Notice to Mariners 1859-1908=		(Cotta) Kadalur
British Chart No. 70-1880	=	Kadalur

On 21<sup>st</sup> April 1909, in this letter No. 110G, the Presidency Port Officer, wrote to the Chief Secretary; "In reply to your letter dated 29<sup>th</sup> ultimo No.211 of 1909 forwarding copy of letter No. 14308 dated 15<sup>th</sup> February last from the Hydrographer to the United States Navy, I have the honor to inform you that the lighthouse will be known as "COTTA POINT" only." But the same officer in his Mariners notice dated 13<sup>th</sup> September 1909 and his letter to Chief Secretary after commissioning the light mentioned it as 'KOTTA POINT' again. May be to avoid this confusion, the lighthouse was later renamed as Kadalur Point. But the Local people always called the light as Thikkodi Lighthouse after the nearby Railway station and market.

The 55 mm petroleum vapour lamp used as illuminant at Kadalur Point served satisfactorily for a long period and along with the original equipment, a Capillary lamp was also supplied as an emergency source for use in situations, when the petroleum vapour burner system fails. On 16<sup>th</sup> March 1995, the light was electrified by changing the light source to 400W Metal Halide lamp. To make the electric light system fool proof, a three-point lamp changer system with 230V, 400W Metal Halide lamp as main source and 12V, 100W Halogen lamp with back up battery supply as emergency source was commissioned on 12<sup>th</sup> November 1998. This system was again modified on 27<sup>th</sup> November 2003 by changing to cluster lamp assembly (4 Nos. 230V, 150W Metal Halide lamps with separate UPS system for each lamp).

### Rotation of optic

Friction free rotation of the huge second order Optic with four panels is made possible by floating it on Mercury. Mercury provides a friction free rotation than any bearings and 119 Kilogram Mercury is used at Kadalur point lighthouse to float the apparatus. M/s Chance brothers, England has provided a clockwork mechanism with the original equipment to rotate the Optic at constant speed to maintain the advertised character of the light. A dead weight at the end of a long wire rope is manually wound on a drum and when left free, gravitational force of the dead weight pulls the rope down rotating the drum. This rotation later transmitted through gears and passed through a speed governor for maintaining constant speed, was used to rotate the optic. A single winding was able to rotate the optic for 4 hours and this system served with out fail for 87 years. On 9<sup>th</sup> August 1996, electronic pulse motors were installed to rotate the optic. A standby motor with auto-change over system is also provided.

### Ganapathi Kandy Koran and family

When Captain Smith took over the construction work of Kadalur Point Lighthouse in February 1907, he selected a bunch of skilled and unskilled workers from the locals for the construction. The criterion for selection was the natural skill and robust health to withstand hard work for long hours in adverse conditions. Shri Ganapathi Kandy Koran, one in the first batch was sent to the Sacrifice Rock to dress and level the rock for constructing the foundation for tower and when the work was shifted to Kadalur, Koran too shifted at Kadalur as a skilled labour. Captain Smith was impressed with the performance of Koran and when the lighthouse was commissioned he made Koran one of the two Lascars in the lighthouse.

Second son of Koran, Sri Kanaran was always interested in lighthouse work and in childhood itself he found pleasure in helping his father in lighthouse work whenever permitted. When matured, Sri. Kanaran was engaged for work temporarily during the absence of the other Lascar several times and finally on retirement of Koran in 1951, Sri. Kanaran was appointed as Lascar at Kadalur Point lighthouse. In 1981 when Kanaran took retirement after a long and faithful service of 30 years, his fourth son Govindan was waiting in the wings to continue the legacy of the family. Even though the revised recruitment rules created several hurdles in front of Sri. Govindan, finally he was appointed as an Assistant Lightkeeper in 1984. Sri. Govindan served in different lighthouse. As a matter of destiny, the grand son of Ganapathi Kandy Koran, Sri. Govindan was the acting Head light keeper of this lighthouse when it was rededicated to the nation on 20<sup>th</sup> November 2009 during its centenary celebrations.

#### The last shipwreck

The last wreck at the Sacrifice Rock happened on 30<sup>th</sup> January 1909, during the construction work of the lighthouse. The sailing vessel 'Ganesh Prasad' registered at Porbandar, loaded with wooden logs and bamboos was on her way to Cannanore from

Beypore. The vessel that left Beypore port by 4 AM struck on one of the submerged rocks at 4 PM on that day. The Captain and crew of the vessel had the help of local fishermen to reach shore safely, after abandoning the ship. There was no time to retrieve the vessel or cargo as the vessel was thrashed to pieces by the waves within no time.

Kadalur Point lighthouse is proudly keeping its head high even in this centenary year, announcing that no ships wrecked on Sacrifice rock after commissioning of the light.

#### Centenary celebrations

The centenary of Kadalur Point was celebrated at lighthouse premises on 20<sup>th</sup> October 2009. Sri. Mullappalli Ramachandran, Hon'ble Union Minister of State for Home rededicated the lighthouse to the nation in the presence of huge gathering of local public.

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Researched and compiled by; I C R Prasad Assistant Engineer (E), Minicoy lighthouse

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